PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the Application of

Jean-Marc ANDREOLI et al.   Group Art Unit: 2176

Application No.: 09/421,846   Examiner: W. Bashore

Filed: October 20, 1999   Docket No.:   109619

For: DOCUMENT CONSTRAINT DESCRIPTORS OBTAINED FROM USER SIGNALS
        INDICATING ATTRIBUTE-VALUE RELATIONS

REQUEST FOR RECONSIDERATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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Sir:

In reply to the April 8, 2003 Office Action, reconsideration of the rejection and

objections is respectfully requested in light of the following remarks.

Claims 1-16 are pending.

The Office Action objects to the disclosure based on a failure "to provide proper

antecedent basis for the claimed subject matter", citing 37 CFR §1.75(d)(1) and MPEP

§608.01(o). The only claim language mentioned in the body of the objection is "a method of

obtaining document descriptors from analysis of logical relations equivalent to received

attribute-value relations," "Knowledge Brokers" and "Feature Constraints." Further, the

objection appears to argue lack of enablement to make and use the claimed invention.

With respect to the meaning of the aforementioned terms, Applicants respectfully

point out that the claim language is being paraphrased incorrectly.

For example, claim 1 recites a "method for obtaining document constraint

descriptors." This is different from the quoted language in the objection to claims 1-16,

which omits the word "constraint" and merely recites a "method of obtaining document descriptors . . ."

Applicants define "document constraint descriptor" on page 12, lines 1-3 of the specification. On page 11, Applicants also define "document reference" and "constraint." Applicants define "logical relation" on page 12, lines 15-17 of the specification. Applicants also indicate when a set of logical relations is "equivalent" to a set of attribute-value relations, for example, on page 12, line 18-21. Moreover, "attribute," "value" and "attribute-value relations" are defined on page 12, lines 7-14.

Applicants also indicate when a set of constraints is equivalent to a set of logical relations, for example, on page 13.

"Knowledge Brokers" are defined in the related art mentioned on pages 1-4 of the specification. Further, on page 4 of the specification, Applicants clearly state that knowledge broker techniques are described by the aforementioned related art of Andreoli et al. Brokers are also defined on page 17, lines 14-19 of the specification.

The meaning of the terminology "feature constraints" is set forth on pages 19-41 of the specification.

Rule 75(d)(1) requires that the terms and phrases used in the claims must find clear support or antecedent basis in the description so the meaning of the terms in the claims may be ascertainable by reference to the description.

Applicants respectfully submit that they have clearly defined the terms used in the claims and that the specification provides full support for the claim terminology, thus complying with Rule 75(d)(1) and MPEP §608.01(o).

Accordingly, this aspect of the objection is without merit and should be withdrawn.

The Office Action, in the body of the objection to the specification, concludes that the

disclosure is insufficient to teach one skilled in the pertinent art a method of making and

using Applicants' invention without undo (sic:undue) experimentation.

Also, the Office Action rejects claims 1-16 under 35 USC §112, first paragraph, based

on lack of enablement. Applicants respectfully traverse both the objection to the

specification and the rejection of claims 1-16 based on alleged lack of enablement.

In support of this alleged lack of enablement, the Office Action indicates that a

specific example (from start to finish) of Applicants' invention cannot be found within the

disclosure, whereas a substantial part of the disclosure discloses known processes.

Applicants strenuously traverse this ground of objection and rejection.

An analysis of whether the claims under appeal are supported by an enabling

disclosure requires a determination of whether that disclosure contained sufficient

information regarding the subject matter of the appealed claims so as to enable one skilled in

the pertinent art to make and use the claimed invention. The test for enablement is whether

one skilled in the art could make and use the claimed invention from the disclosure coupled

with information known in the art **without undue experimentation**. See, United States v.

Telectronics, Inc., 857 F.2d 778, 785, 8 USPQ2d 1217, 1223 (Fed, Cir, 1988), cert, denied,

109 S.Ct. 19 54 (1989); In re Stephens, 529 F.2d 1343, 1345, 188 USPQ 659, 661 (CCPA

1976). The dispositive issue with regard to the first paragraph rejection is whether the

disclosure is sufficient to enable one of ordinary skill in the art to practice the claimed

invention. See, Lindemann Machinenfabrik GMBH v. American Hoist & Derrick Co., 730

F.2d 1452, 1463, 221 USPQ 481, 489 (Fed. Cir. 1984).

In order to make a rejection, the Examiner has the initial burden to establish a

reasonable basis to question the enablement provided for the claimed invention. See, In re

Wright, 999 F.2d 1557, 1561-2, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993) (Examiner must

provide a reasonable explanation as to why the scope of protection provided by a claim is not

adequately enabled by the disclosure). A disclosure which contains a teaching of the manner

and process of making and using an invention in terms which correspond in scope to those

used in describing and defining the subject matter sought to be patented must be taken as

being in compliance with the enablement requirement of 35 USC 112, first paragraph unless

there is a reason for doubting the objective truths of the statements contained in the disclosure

which must be relied on for enabling support. Assuming that sufficient reason for such doubt

exists, a rejection for failure to teach how to make or use will be proper on that basis. See, In

re Marzocchi, 439 F.2d 220, 223, 169 USPQ 367, 369 (CCPA 1971).

Once the Examiner has established a reasonable basis to question the enablement

provided for the claimed invention, the burden falls on the applicant to present persuasive

arguments, supported by suitable proofs where necessary, that one skilled in the art would be

able to make and use the claimed invention using the disclosure as a guide. See In re

Brandstadter, 484 F.2d 1395, 1406, 179 USPQ 286, 294 (CCPA 1973). In making the

determination of enablement, the Examiner shall consider the original disclosure and all

evidence in the record, weighing evidence that supports enablement against evidence that the

specification is not enabling.

Thus, the dispositive issue for enablement is whether the applicant's disclosure,

considering the level of skill in the art as of the date of the appellant's application, would have

enabled a person of such skill to make and use the claimed invention without undue

experimentation.

The threshold step in resolving this issue is to determine whether the Examiner has

met his burden of proof by advancing acceptable reasoning inconsistent with enablement.

Factors to be considered by an Examiner in determining whether a disclosure would

require undue experimentation include (1) the quantity of experimentation necessary, (2) the

amount of guidance or direction presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims. See, In re Wands, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988), citing Ex parte Formal, 230 USPQ 546, 547 (Bd. Pat, App. & Int. 1986).

This objection, which alleges lack of enablement, only addresses one of the six required factors, i.e., the amount of guidance or direction presented, to ascertain whether Applicants' claimed invention would require undue experimentation to make and use. As such, the objection clearly fails to make out a prima facie case of lack of enablement of the claimed invention. In other words, unless and until all of the six aforementioned "Wands" factors are addressed in detail by the Office Action, the Office Action fails to make out a prima facie case of lack of enablement.

This failure to comply with the explicit requirements of patent law, which are set forth above and further set forth, in detail, in MPEP §§2164-2164.08(c), also constitutes a failure to accord Applicants the substantive and procedural due process to which they are entitled under the Administrative Procedures Act. See in this regard, In re Zurko, 119 S.Ct. 1816, 50 USPQ2d 1930 (1999), and In re Gartside, 53 USPQ2d 1769 (Fed. Cir. 2000).

Turning to the merits of the objection, Applicants respectfully disagree with the Office Action on the enablement issue for at least the following reasons.

In the first place, Applicants' entire disclosure, including the entire specification (which includes the originally filed claims) and drawings, must be taken into consideration. In this regard, the Office Action's statement, on page 10, section 19, stating "[A] mere description of the figures does not, by itself, disclose Applicant's invention" improperly dismisses the disclosure of the ten detailed drawing figures.

Applicants clearly disclose their invention in detail. The invention, like the related

Andreoli disclosures referred to in the specification, can be used to perform search and

retrieval of electronic documents - see page 4, lines 4-6.

As pointed out on page 4 of the specification, Applicants' invention alleviates

constraint production problems encountered by users by providing techniques that obtain

document descriptors from user signals.

On page 5, lines 7, ff., Applicants disclose that their new techniques can be

implemented in a method for obtaining document constraints from user signals, and can be

performed with a machine that includes user interface circuitry.

On page 6, Applicants disclose that their method can solve a set of constraints to

obtain a solution to obtain document references, and provide convenient ways for ordinary

users to produce document constraint descriptors.

After setting forth a conceptual background which defines relevant terms and

relationships between terms (pages 8-13), a system implementing the invention is described

in detail (pages 13-17).

Then, a specific actually implemented embodiment of the systems and methods of the

invention is set forth starting on page 17. Knowledge brokers are addressed, starting on page

17, line 8. On pages 17, ff., brokers are defined, how they can collaborate is explained, their

logical operations are discussed, and feature constraints are defined and discussed in detail,

including sorts and features.

Scope-splitting by knowledge brokers is discussed on pages 20, ff. The specification

then discusses basic feature constraints (BFCs) and signed feature constraints (SFCs),

including specific examples. Then, the axioms of the constraint system of this invention are

disclosed (page 23, ff). The axioms are set forth in mathematical detail in Appendix A of the

specification. Then, starting on page 25, the specification indicates how a set of SFCs can be

solved by a constraint satisfaction process. The algorithm for constraint satisfaction is informally discussed starting on page 26, line 14, and is disclosed in mathematical detail in Appendix B2.

With reference to Figs 3-10, the specification then illustrates several document search and retrieval transactions that can be performed. For example, the methods of Figs. 3, 5 and 6 compile a signed feature constraint from a set of logical relations. As set forth starting on page 34. with reference to Fig. 7, the inventive method receives a feature constraint from a device, then receives further user signals requesting a search for documents satisfying the user input feature constraint. In response, the processor, using the methods set forth in Figs. 4 and/or 6 for solving basic feature constraints and signed feature constraints, solves the user entered feature constraint.

As pointed out on page 35, if the processor obtains a solution, the solution can be used to formulate a search request, which the processor can then provide in a call to search engine routines it also executes.

The remaining steps in Fig. 7 are discussed in detail on pages 35-37. Variations are discussed thereafter.

As can be seen from the aforementioned comments, Applicants have disclosed and described in detail search systems and methods according to their invention from start to finish in a manner which permits one of ordinary skill in the art to make and use the invention without undue experimentation.

Accordingly, the objection to the specification is improper and should be withdrawn.

Furthermore, with respect to the rejection of claims 1-16 on this basis, the actual claim language recited in claims 1 and 13 correlate with Applicants' disclosure.

Claim 1 recites a method for obtaining document constraint descriptors based on user signals, the method comprising:

(A)   receiving user signals indicating a set of attribute-value relations that can

apply to documents;

(B)   using the user signals to obtain, without requiring user intervention, logical

relations equivalent to the attribute value relations, the logical relations comprising at least

one of a sort and a feature; and

(C)   using the logical relations to obtain, without requiring user intervention, a

document constraint descriptor defining a set of one or more constraints equivalent to the

logical relations.

Feature (A) is disclosed, for example, as Step s41 of Fig. 4 or step s62 of Fig. 6, or

step s91 of Fig. 7. Feature (B) is disclosed, for example, in step S44 of Fig. 4, or step s64 of

Fig. 6, and is part of step s92 of Fig. 7. Feature (C) is disclosed, for example, in step s45 of

Fig. 4, or step s65 of Fig. 6, and is part of step s92 of Fig. 7.

Claim 13 recites a machine for obtaining document constraint descriptors based on

user signals, the machine comprising:

a processor (disclosed in Fig. 1 and on pages 14-17, line 6, for example); and

user interface circuitry for providing user signals to the processor (disclosed,

for example, in Figs. 1 and 3 and associated specification text);

the processor operating to:

receive user signals through the user interface circuitry indicating a set

of attribute-value relations that can apply to documents (disclosed, for example, as Step s41

of Fig. 4 or step s62 of Fig. 6, or step s91 of Fig. 7);

use the user signals to obtain, without requiring user intervention,

logical relations equivalent to the attribute-value relations, the logical relations comprising at

least one of a sort and a feature (disclosed, for example, in step S44 of Fig. 4, or step s64 of

Fig. 6, and being part of step s92 of Fig. 7, the sort and feature aspect of feature constraints

being set forth in the sentence bridging pages 19 and 20 of the specification, for example, and

congruence axioms involving sorts and features, for example, being disclosed on page 25,

lines 1-4); and

use the logical relations to obtain, without requiring user intervention,

a document constraint descriptor defining a set of one or more constraints equivalent to the

logical relations (disclosed, for example, in step s45 of Fig. 4, or step s65 of Fig. 6, and being

part of step s92 of Fig. 7).

Moreover, concerning the aforementioned "Wands" factors, Applicants respectfully

submit that there is (1) a minimal quantity of experimentation necessary to achieve the

claimed invention based on Applicants' extensive disclosure; (2) the amount of guidance or

direction presented is more than adequate for one of ordinary skill in the art to follow; (3) the

specification discloses that a working example has been implemented and sets forth more

than sufficient detail of the claimed systems and methods; (4) the nature of the invention is in

a field of endeavor, information search and retrieval, which is well known and does not

require chemical unpredictability, for example; (5) the state of the prior art appears to

disclose an understanding of search and retrieval terms; (6) the relative skill of those in the art

appears to be very sophisticated, as evidenced by the publication of the inventor's related

work in prestigious peer-reviewed publications; (7) the predictability of the art appears to

very high, not involving chemical or biotech issues; and (8) the breadth of the claims is

reasonable. Regarding the predictability of the art issue, Applicants also note that, as pointed

out in In re Fisher, 427 F.2d 833, 839, 166 USPQ 18, 24 (CCPA 1970), the scope of

enablement obviously varies inversely with the degree of unpredictability of the factors

involved. The degree of unpredictability is extremely low in this non-chemical, non-

biotechnical art.

For at least the reasons outlined above, Applicants respectfully submit that this application contains a disclosure which enables one of ordinary skill in the art to make and use the claimed invention without undue experimentation.

Accordingly, both the objection and the rejection based on lack of enablement are improper and should be withdrawn.

The Office Action rejects claims 1-5, 8 and 13-16 under 35 USC 103(a) as unpatentable over U.S. Patent 5,794,233 to Rubenstein (hereinafter, "Rubinstein '233") in view of U.S. patent 5,693,938 to Wilson et al. (hereinafter, "Wilson"). This rejection is respectfully traversed.

In rejecting claims under 35 USC 103, it is incumbent on the Examiner to establish a factual basis to support the legal conclusion of obviousness. See, In re Fine, 837 F.2d 1071, 1073, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In so doing, the Examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one of ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal Inc. v. F-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir. 1988), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the Examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note, In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). The mere fact that the prior art may be modified in the manner suggested by the examiner does not make the

modification obvious unless the prior art suggested the desirability of the modification. In re

Fritch, 972 F.2d 1260, 1266, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1992). To establish prima

facie obviousness of a claimed invention, all the claim limitations must be suggested or

taught by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1970). All words

in a claim must be considered in judging the patentability of that claim against the prior art.

In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). It is well settled that

a rejection based on 35 USC 103 must rest on a factual basis, which the Patent and

Trademark Office has the initial duty of supplying. In re GPAC, Inc., 57 F.3d 1573, 1582, 35

USPQ2d 1116, 1123 (Fed. Cir. 1995). A showing of a suggestion, teaching, or motivation to

combine the prior art references is an "essential evidentiary component of an obviousness

holding." C.R. Bard, Inc. v. M3 Sys. Inc., 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232(Fed.

Cir. 1998). This evidence may flow from the prior art references themselves, the knowledge

of one of ordinary skill in the art, or, in some cases, from the nature of the problem to be

solved. See Pro-Mold & Tool Co. v. Great Lakes Plastics, Inc., 75 F.3d 1568, 1573, 37

USPQ2d 1626, 1630 (Fed. Cir. 1996). However, the suggestion more often comes from the

teachings of the pertinent references. See In re Rouffet, 149 F.3d 1350, 1359, 47 USPQ2d

1453, 1459(Fed. Cir. 1998). This showing must be clear and particular, and broad conclusory

statements about the teaching of multiple references, standing alone, are not "evidence." See

In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617. However, the suggestion

to combine need not be express and "may come from the prior art, as filtered through the

knowledge of one skilled in the art." Motorola, Inc. v. Interdigital Tech. Corp., 121 F.3d

1461, 1472, 43 USPQ2d 1481, 1489(Fed. Cir. 1997).

It is impermissible for an Examiner to engage in hindsight reconstruction of the

claimed invention using appellant's structure as a template and selecting elements from

references to fill the page. The references themselves must provide some teaching whereby

the appellant's combination would have been obvious. In re Gorman, 911 F.2d 982, 986, 18

USPQ2d 1885, 1888 (Fed. Cir, 1991). That is, something in the prior art as a whole must

suggest the desirability, and thus obviousness, of making the combination. See, In re Beattie,

974 F.2d 1309, 1312, 24 USPQ2d 1040, 1042 (Fed. Cir. 1992); Lindemann Machinenfabrik

GMBH v. American Hoist and Derrick Co., 730 F.2d 1452, 1462, 221 USPQ 481, 488 (Fed.

Cir. 1984).

Moreover, speculation cannot properly serve as the basis for a rejection under 35 USC

§103, In re Steele, 305 F.2d 859, 862, 134 USPQ 292, 295 (CCPA 1962), In re Wilson, 424

F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970), and Ex parte Lemoine, 46 USPQ2d

1420 at 1430 (Bd. Pat. App. & Int. 1994).

Applicants respectfully submit that this rejection is based solely on speculation, which

cannot properly serve as the basis for a rejection.

The Office Action speculates that "obtaining document constraint descriptors based

on user signals" is disclosed by the Abstract, but no indication is given as to which of the

more than 100 words in that abstract constitutes that disclosure. Reference is also made to

Fig. 2, item 250, which is a query pane, which "enables the user to type a query expression or

edit a user expression previously constructed. See col. 4, lines 49-54.

Rubinstein '223 never mentions "document constraint descriptors" and the Office

Action fails to indicate how Rubinstein '223 obtains them or that the way they are obtained is

by generating document constraint descriptors. The abstract only indicates that Rubinstein

automatically identifies for a user keyword phrases in a plurality of documents. There is no

indication in Rubinstein '223 that document constraint descriptors are generated in any of the

disclosed identifying keyword phrases in a plurality of documents or in generating an abstract

for the user.

The Office Action then speculates that Rubinstein '223 receives user signals indicating a set of attribute value-relations that can apply to documents. Whereas Rubinstein '223's user may very well enter document attributes, there is no indication that the user enters attribute values. Rubinstein '223, for example, never discloses any attribute value relationships, and the Office Action never indicates where any such attribute value relationship exists in Rubinstein '223. The Office Action mentions Fig. 2, items 206, 208 and 250 in this regard, for example. However, these items merely provide space for attributes, e.g., keywords. No disclosure of attribute values or a relationship between attributes and their values is disclosed in Rubinstein '223.

The Office Action also mentions col. 3, lines 34-44, which discusses keywords and relevance codes (which are generated by linguistic analyses). This is not evidence of receiving user signals indicating a set of attribute value-relations that can apply to documents. Even if the linguistic analyses generated relevance codes were somehow considered to be attribute value relationships, which they are not, they are not user generated, as recited in claims 1 and 13. The Office Action also mentions col. 4, lines 1-10, which lets a user generate query expressions in which one or more keyword phrases appear as operands (col. 4, lines 1-22). However, how this constitutes attribute-value relationships is not clear nor is it explained in the Office Action.

The Office Action then discusses "obtaining logical relations via inclusion of keywords into logic panes to produce logically joined expressions" as being disclosed in Fig. 2, items 242 , 246 and col. 4, lines 17-30, and asks Applicants to "compare with claim 1 'using . . . to obtain logical relations equivalent to the attribute-value relations."

Applicants respectfully submit that items 242 and 246, which provide for document keywords, and the ANDing these search terms together (col. 4, lines 17-30) in no way is obtaining logical relations equivalent to attribute-value relations input by a user.

As noted above, a user does not enter attribute-value relationships in Rubinstein '223. Even if such relationships were entered, which they are not, the logical relationships obtained by Rubinstein '223 are merely ANDing search terms together and have nothing to do with attribute-value relationships. These ANDed terms are merely Boolean logical combination of keywords.

Then, the Office Action alleges that Rubinstein '223 uses the logically joined expressions to obtain a displayed constraint descriptor set as applied for document searching, citing Fig. 2, item 250 and col. 4, lines 49-56. However, pane 250 only provides for user input terms and does not obtain or display a document constraint descriptor defining a set of one or more constraints equivalent to the logical relations. In col. 4, lines 49-56, Rubinstein merely discloses that pane 250 can be used to type in, or edit a query expression. This has nothing to do with obtaining or displaying a document constraint descriptor defining a set of one or more constraints equivalent to the logical relations.

The Office Action admits that Rubinstein '223 does not specifically teach a "sort." To fill that admitted shortcoming of Rubinstein '223, the Office Action turns to Wilson, which discloses an automatic, context-organizing query interface. The Office Action asserts that Wilson teaches selection of arguments, operations and relations, and a logical operation may be sorting or other operation, citing col. 3, lines 45-55.

Applicants respectfully note that claims 1 and 13 are not reciting a conventional sorting process. Claims 1 and 13 use the term "sort," which is defined in the paragraph bridging pages 19 and 20 of the specification as a unary relation expressing a property of a single entity, in the context of using the user input signals to obtain, without user intervention, logical relations, which comprise at least one of a sort and a feature, which are equivalent to the attribute value relations. Neither Rubinstein '233 nor Wilson disclose a sort as recited in claims 1 and 13.

Moreover, the alleged motivation to combine Rubinstein '223 and Wilson to incorporate sorts for convenient arrangement of related/ranged results is a broad, general statement of the type which does not provide evidence of the desirability of making the proposed modification. A showing of motivation must be clear and particular, and broad conclusory statements about the teaching of multiple references, standing alone, are not "evidence." See In re Dembiczak, 175 F.3d 994 at 1000, 50 USPQ2d 1614 at 1617.

Accordingly, the Office Action fails to make out a prima facie case of obviousness of the claimed invention.

The Office Action also applies Wilson to modify Rubinstein '223 to automatically provide whatever Rubinstein '223 provides, citing col. 7, lines 12-21 and col. 12, lines 34-48 of Wilson, which allegedly disclose automatically making necessary changes and divisions in Boolean groupings within relations, resulting in proper constraints. Actually, Wilson lets a user select the Boolean operators to use in the search query (col. 7, lines 12-21) or if the user selects a Boolean in step 74 of Fig. 2 that is different than previous Booleans within the same group, the processor may create a new group automatically or let the user create the new group (col. 12, lines 34-48).

Applicants do not understand what automating a particular decision step in a Boolean operation has to do with the overall process of using the user signals, without user intervention, to obtain logical relations equivalent to the attribute value relations, and using the logical relations to obtain, without requiring user intervention, a document constraint descriptor defining a set of one or more constraints equivalent to the logical relations. In both Rubinstein '223 and in Wilson, the user input includes logical Boolean operations. The proposed combination of references simply does not disclose the inventions recited in claims 1 and 13.

Additionally, the reason given for the motivation to combine these references in this regard, i.e., to release the burden of modification from the user, is a broad, general statement of the type which does not provide evidence of the desirability of making the proposed modification.

Accordingly, the Office Action fails to make out a prima facie case of obviousness of the invention recited in claims 1 and 13.

With respect to claims 15 and 16, neither Rubinstein '223 nor Wilson disclose a document constraint descriptor or using the document constraint descriptor to solve the set of one or more constraints to obtain a solution. The search query in col. 5, lines 54-61 of Rubinstein '223 simply does not constitute a document constraint descriptor or using the document constraint descriptor to solve the set of one or more constraints to obtain a solution, at least for the reasons stated above regarding the traversal of the rejection of claim 13.

Claims 2-5, 8 and 14-16 are patentable over Rubinstein '223 and Wilson at least for the reasons presented above regarding the patentability of claims 1 and 13.

The Office Action rejects claims 6 and 7 under 35 USC 103(a) over Rubinstein '233 in view of U.S. patent 5,693,938 to Wilson as applied against claim 1, and further in view of U.S. Patent 5,404,294 to Karnik. This rejection is respectfully traversed.

Karnik is not directed to identifying one of a plurality of documents, as are Rubinstein '223 or Wilson. Instead, Karnik is only interested in entering information or and/or extracting information from preselected areas in one or more documents.

The Office Action is really stretching this reference combination in the sense that it completely fails to establish a motivation to combine these references. The alleged reason to combine these three references is to provide Rubinstein '223 the capability of querying data from inputted IRS forms for statistical purposes. However, in order to modify Rubinstein '223, one would have to disregard Rubinstein '223's main function of identifying one of a

plurality of documents and identifying the document by generating an abstract by linguistically analyzing the plurality of documents. One of ordinary skill in the art would not have been motivated to fundamentally alter Rubinstein '223 in this manner. Moreover, Rubinstein '223 is not restricted to querying only certain portions of a form, and there would no motivation to one of ordinary skill in the art to so restrict Rubinstein '223.

This rejection is a prime example on improper hindsight reconstruction of Applicants' invention based solely on Applicants' disclosure.

Accordingly, the Office Action fails to make out a prima facie case of obviousness of the subject matter recited in claims 6 and 7.

The Office Action rejects claims 9-12 under 35 USC 103(a) over Rubinstein '233 in view of U.S. Patent 5,693,938 to Wilson as applied against claim 1, and further in view of U.S. Patent 5,721,897 to Rubinstein (hereinafter, "Rubinstein '897"). This rejection is respectfully traversed.

Claim 9 further recites solving the set of one or more constraints to obtain a solution and using the solution to obtain one or more document references. The Office Action does not even address this positively recited feature, thereby denying Applicants fundamental procedural and substantive due process under the Administrative procedures Act. For this reason alone, the Office Action fails to make out a prima facie case of obviousness of the subject matter recited in claim 9. Moreover, the applied references do not teach this feature at least for the reasons stated above regarding the traversal of the rejection of claim 1.

The Office Action only addresses the network feature of this claim. However, the network feature is not the only positively recited feature of claim 9.

Claims 10-12 recite the features of claim 1 and are patentable at least for the reasons stated above regarding the patentability of claim 1 with respect to Rubinstein '223 and Wilson. It is noted that Rubinstein '897 is only applied to teach creating logical relations

using the Internet, and not to remedy any of the aforementioned deficiencies in Rubinstein '233 or Wilson.

For the foregoing reasons, Applicants respectfully submit that the objections and rejections of record regarding claims 1-16 are improper and should be withdrawn.

Turning to the Response to Arguments portion of the Office Action, Applicants note that a specific example of an operative embodiment of Applicants' invention is disclosed on page 17, lines 8-13, and that specific examples of methods according to the invention are disclosed in Figs. 4, 6 and 7. The assertion that a mere description of the figures does not, by itself, disclose Applicants' invention overlooks the content of the figures themselves and the detailed explanation of those figures in the specification, which is discussed above regarding the traversal of the alleged lack of enablement objection and rejection.

The other arguments presented on pages 10 and 11 of the Office Action are all addressed in Applicants' remarks as set forth above.

Should the Examiner believe that anything further is needed to place this application in better for allowance, the examiner is invited to contact Applicants' undersigned representative at the telephone number listed below.

Respectfully submitted,

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Date: May 16, 2003

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Deposit Account No. 24-0037